

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

Financial Intermediation, especially banks have a major role in channeling funds from units in surplus to units in deficit. Banks play critical role in the growth of economic. Manlagnit (2015), said that overall economic success of a country is positively related to their financial sector development. But, their role is not only associated with economic growth, but also explaining overall economic performance, poverty reduction and reduced inequality in their country. Major revenue of Bank comes from interest rate spread (differences between credit rate and deposit rate). But, those interest rate spread actually can be a major impact toward economic growth in their country. Countries with lower interest rate spread are believed to experience higher economic growth because they can manage their efficiency well. Higher interest rate spread would be a sign that financial institutions on those country are inefficient. An inefficient bank would have more problem loans and higher operating costs (Calice & Zhou, 2018).

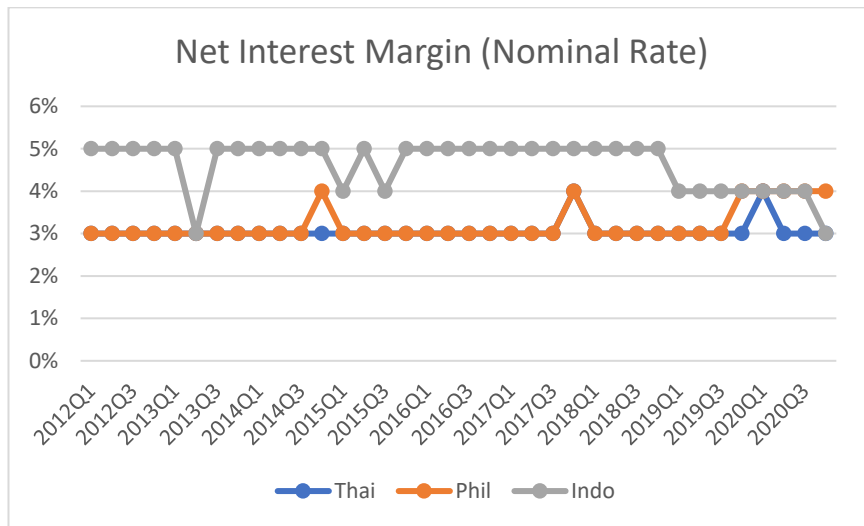
Banks have to deal with deposit supply and loan demand from customers. At the other hand, Banks also have to face the volatility of market rate. This will lead to higher reinvestment and refinancing risk. Consequently, Banks have to charge higher interest margin to mitigate those risk. This volatility will positively influence net interest margin. Net Interest Margin (NIM) or interest spread is critical fundamental factor of banking as a financial intermediary business. This spread is

the differences between weighted average of yields on assets (interest on lending) and liabilities (interest on funding or deposit). But, higher spread on NIM will lead to higher default rate, no wonder higher spread have a negative significant impact toward economic growth and a sign of inefficiency (Islam & Nishiyama, 2016). Previous research by Agapova and McNulty (2016) argued that low spreads on NIM are a good indicator that financial system has been more efficient. So, that those spread can be a particularly good measure of efficiency. In the condition where financial system is not well developed, inefficient, bank's lending rate could be high and low deposit rate. In this case, market has to accept rates by those uncompetitive and inefficient banking system (Antwi et al., 2017).

The behavior of 8 years bank net interest margin spread in Three South East Asean Countries reveal in figure 1a and b. This study chooses Indonesia, Philippines, and Thailand. Those countries are chosen because they were badly affected by Asian financial crisis in 1997-1998 but successfully recovered right after the crisis (Ahmad & Matemilola, 2013). Other than that, those three countries have been adopted Basel II since 2010. Basel II which is the revised and extended version of Basel I is based on three main pillars: minimum capital requirements, supervisory review and market discipline. Basel II is expected to produce significant benefits in helping banks to manage risk, stability and make a better risk assessment (Manlagnit, 2015). Based on Data in Worldbank, Developing countries around the world still adopted Basel II until now- 2020. In order to assess the readiness of banks in this three countries towards Basel III implementation in the future.

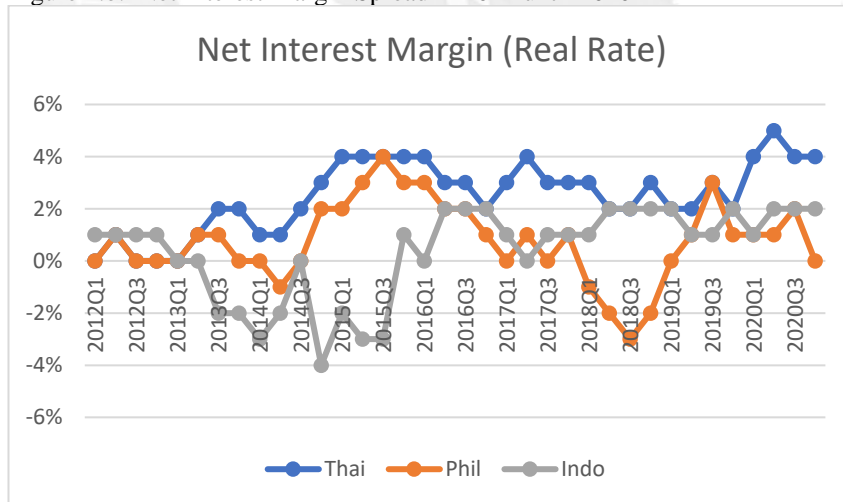
Ho & Saunders (1981) said that there is a strong positive relationship between higher spread and higher default rate. From societal perspective, higher spread will lead to lower social welfare. High interest rates reduce incentive to invest and slow down economic growth. Interest rate spread attracted a lot of debate in both public and policy forum (Antwi et al., 2017). This study is expected to identify contributing factors towards NIM spread and will consider both macroeconomics factors and bank specific factors. Based on Figure 1a and b, movement of Net Interest Margin in three countries in the last eight years has continued to decline. This is a good sign, but due to the global financial crisis in 2020 caused by Covid-19 Pandemic, make a bank's ability to generate profit will be eroded. This is caused by slowing demand for credit and high risk on Non Performing Loan (<https://keuangan.kontan.co.id/>). Countries with lower NIM spreads believed to experience higher level of financial development and higher penetration in the use of financial services. Based on Figure 1a (Nominal Rate), Banks in Thailand is believed to be the highest level of financial development and Indonesia is believed to experience the lowest level of financial development. But from real rate in figure 1.b, Banks in Thailand are having the largest net interest margin during this eight years.

FIGURE 1.A NET INTEREST MARGIN SPREAD IN 2012- 2020



Source: Data Processing (2021)

Figure 1.b. Net Interest Margin Spread in 2012 until 2020



Source: Data Processing (2021)

Table 1.1. Summary of Phenomenon from Previous Studies

Author	Article	Novelty
Bikker & Gerritsen (2018)	Determinants of Interest Rates on Time Deposit & Saving Accounts: Macro factors, Bank Risk, and Account Features	examine how macroeconomic, bank-specific, and account-specific characteristics affect the deposit interest rates of banking products
Gambacorta (2008)	How do Banks set Interest Rate?	Micro and Macro economic factors that influence banks loan interest rate
Ho & Saunders (1981)	Determinants of Bank Interest Margin: Theory & Empirical Evidence.	$S = iL - iD$
Calice & Zhou (2018)	Benchmarking Cost of Financial Intermediation around the World	examine the underlying bank-level, structural, macroeconomic & institutional determinants of net interest margins.

1.2 Research Objectives

Purpose of this study is to find out determinants factors affecting Net Interest Margin in Indonesia, Thailand & Philippines based on Interdependency relationship between factor affecting loan rate and factors affecting deposit rate on each country. Previous research by (Calice & Zhou, 2018) only use single equation model to determine factors affecting Net Interest Margin. This research will find out

determinants of NIM that comes from Factors affecting loan rate and deposit rate. This study investigate determinants factors of NIM in each country separately because we believe that every country has their own uniqueness and regulations.

1.3 Reserch Questions

This study has three research questions, such as:

1. What are the determinants factors affecting Loan Interest Rate in Indonesia, Thailand, Philippines?
2. What are the determinants factors affecting Time Deposit Rate in Indonesia, Thailand, Philippines?
3. What are contributing factors affecting NIM based on simultaneous equation model from Loan Rate & Time Deposit rate in Indonesia, Thailand , Philippines?

1.4 Research Benefits

This research will contribute several benefits not only on academic study, but also practical as well.

1.4.1 Practical Contribution

This research may be able to help regulators to set policy for banking industry in order to enhance economic growth through lower interest margin without reducing bank's profitability. This research is expected to be a guideline for commercial banks to improve themselves in order to comply with government regulation to reduce NIM. Most of them (Commercial Banks) will be reluctant to

reduce their profitability. However, on the other hand, commercial banks must prepare themselves, if in the future, government set new regulations to lower NIM.

1.4.2 Theoretical Contribution

Table 1 above shows some phenomenons that had been investigated on previous research. Based on that previous research, this study proposes uniqueness about using simultaneous equations model to investigate factors affecting NIM. Table 1 above proved that previous studies used single equation model to investigate determinants factor affecting NIM, Time Deposit Rate and Loan rate separately. Other than that, this study has four novelties or uniqueness. The first uniqueness for this paper is our consideration towards real rate. Most of the researchers ignore about real rate. The real rate is self, Based on Ross *et al.*, (2018) is interest rates that have been adjusted for inflation. Many researchers ignore about this real rate and only focus about nominal rate that has been exposed in the data. This research will consider about both of these rate. Whether the findings will show the same result or not. Second uniqueness of this paper is using simultaneous equations model to determine factor affecting Net Interest Margin based on interdependency relationship between Deposit Rate and Credit Rate. Most previous research on Banking interest rate focuses either on Deposit Rate or Credit Rate or Net Interest Margin separately. But, in reality, those three rates are strongly related with each other. Best of our knowledge, there is no research that use simultaneous equation model to investigate the interdependency between Lending Rate and Deposit Rate to minimize Net Interest Margin. This study will replicate model from (Gambacorta, 2008) on Loan Rate Equation and (Bikker & Gerritsen, 2018) model

for Time Deposit Rate Equation with additional variable. Third uniqueness is additional variable which is HHI on both of those equation model. HHI will be added on Loan Interest Rate equation and time deposit rate equation because based on (A. Berger & Hannan, 1989), HHI is likely affecting loan rate and deposit rate. Fourth novelty and the last one, there is one additional variable on Loan interest rate equation which is Z score. Because Z score is believed to represent bank's individual risk that can impact on bank's lending behaviour. Beside four novelties above, the purpose of this study is to investigate factors affecting Net Interest Margin that comes from Interdependency relationship between loan rate and deposit rate on commercial banks in Indonesia, Thailand and Philippines.

Table 1.2. Summary of Phenomenon from Previous Studies About Loan Rate

Author	Article	Novelty
Gambacorta (2008)	How do Banks set Interest Rate?	Micro and Macro economic factors that influence banks loan interest rate
Li & Malaone (2016)	Measuring bank risk: An exploration of z-score	risk-adjusted z-score proved to be effective at capturing bank individual risk and systemic risk.
Berger & Hannan (1989)	Price concentration relationship in Banking	Bank's pricing behaviour refers to bank's interest rates. This analysis focused on the role of local market concentration as determinants of these rates.